Serial No. 09/941,438

In the Claims:

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1. (currently amended) A method for processing dermal tissue for implantation into a subject, said method comprising the steps of:

a. removing the epidermal layer of said dermal tissue to produce de-epidermalized tissue;

b. incubating said de-epidermalized tissue in at least one processing solution to remove cells from said de-epidermalized tissue, thereby producing a decellularized tissue matrix;

c. treating said decellularized tissue matrix to cause a reduction in size and an increase in surface area; and

~~c.~~ d. exposing said decellularized tissue matrix to an acylating agent, wherein the ratio of said acylating agent to ~~wet tissue weight~~ is about 0.1% to about 0.3% ~~0.003:1 or less~~, thereby producing a dispersed tissue matrix.

2. Canceled (incorporated into claim 1).

3. (original) The method of claim 2, wherein said treating comprises cryomilling said decellularized tissue matrix.

4. (original) The method of claim 1, further comprising contacting said de-epidermalized tissue with a viral inactivating agent, before, after, or during step (b).

5. (original) The method of claim 1, wherein said tissue is mammalian.

6. (original) The method of claim 4, wherein said tissue is human.

7. (original) The method of claim 1, wherein said acylating agent is glutaric anhydride or succinic anhydride.

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8. (currently amended) The method of claim 1, wherein said ratio of acylating agent to wet tissue weight is about ~~0.002:1 to about 0.001:1~~ 0.1% to about 0.2% of wet tissue weight

9. (original) The method of claim 1, wherein said decellularization solution comprises sodium hydroxide.

10. (original) The method of claim 1, wherein said decellularization solution comprises phosphoric acid.

11. (original) The method of claim 1, wherein said tissue is autogenic, allogenic or xenogenic.

12. (original) The method of claim 1, wherein said step of removing the epidermal layer comprises exposing said tissue to a hypertonic salt solution.

13. (currently amended)A method for dispersing decellularized animal connective tissue, said method comprising the steps of:

treating said decellularized animal connective tissue to cause a reduction in size and an increase in surface area; and

contacting said decellularized, treated, animal connective tissue with a solution comprising an acylating agent, wherein the ratio of said acylating agent to wet tissue weight is about 0.1% to about 0.3% ~~0.003:1 or less~~.

14. Canceled (incorporated into claim 13).

15. (original) The method of claim 14, wherein said treating comprises cryomilling said decellularized tissue.

16. (original) The method of claim 13, wherein said tissue is mammalian.

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17. (original) The method of claim 13, wherein said tissue is human.

18. (original) The method of claim 13, wherein said tissue is connective tissue.

19. (original) The method of claim 13, wherein said tissue is dermal tissue.

20. (currently amended) The method of claim 13, wherein said ratio of acylating agent to wet tissue weight is about ~~0.002:1 to about 0.001:1~~ 0.1% to about 0.2%.

21. (currently amended) A method for ~~altering~~ augmenting the condition of in situ tissue of a subject, said method comprising introducing an effective amount of a dispersed collagen matrix ~~being at the site of the~~ into said in situ tissue of said subject, said dispersed collagen matrix being prepared by treating a decellularized animal connective tissue matrix to cause a reduction in size and an increase in surface area and contacting said decellularized, treated animal connective tissue matrix with a solution comprising an acylating agent, wherein the ratio of said acylating agent to wet tissue weight is about 0.1% to about 0.3% ~~0.003:1 or less~~.

22. (original) The method of claim 19, wherein said subject is a human.

23. (original) The method of claim 19, wherein said dispersed collagen matrix is derived from an allogeneic source.

24. (original) The method of claim 1, wherein said acylating agent is glutaric anhydride or succinic anhydride.

25. (currently amended) The method of claim 1, wherein said ratio of acylating agent to wet tissue weight is about ~~0.002:1 to about 0.001:1~~ 0.1% to about 0.2%.

26. (currently amended) A composition comprising an injectable, dispersed collagen

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matrix prepared by treating a decellularized animal connective tissue matrix to cause a reduction in size and an increase in surface area and contacting said decellularized, treated animal connective tissue with a solution comprising an acylating agent, wherein the ratio of said acylating agent to wet tissue weight is about 0.1% to about 0.3% ~~0.003:1 or less~~.

27. (original) The composition of claim 26, wherein the dispersed collagen matrix is injectable through a 30 gauge needle.

28. (currently amended)The composition of claim 26, wherein the dispersed collagen matrix has a trypsin resistance such that greater than about 40% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.

29. (currently amended)The composition of claim 26, wherein the dispersed collagen matrix has a trypsin resistance such that greater than about 50% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.

30. (currently amended)The composition of claim 27, wherein the dispersed collagen matrix has a trypsin resistance such that greater than about 70% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.

31. (currently amended)The composition of claim 27, wherein the dispersed collagen matrix has a trypsin resistance such that greater that about 90% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.

32. Deleted.

33. (currently amended) An injectable composition comprising ~~an~~ decellularized, acylated, dispersed, dermal tissue matrix having a trypsin resistance such that greater than about 40% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.

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34. (currently amended) The composition of claim 33, wherein the dermal tissue matrix has a trypsin resistance such that greater than about 50% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.

35. (currently amended) The composition of claim 33, wherein the dermal tissue matrix has a trypsin resistance such that greater than about 70% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.

36. (currently amended) The composition of claim 33, wherein the dermal tissue matrix has a trypsin resistance such that greater than about 90% of the dispersed collagen matrix remains undigested when exposed to 2% trypsin at 37°C for 6-24 hours.